

# Work Order ID 105421

\*105421\*

Page 1

August-01-13 11:35:02 AM

Item ID: 646.9712

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Body

Start Date: 8/01/13

Start Qty: 2.00

\*2\*

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 2.00

\*2\*

Customer:

Reference:

Approvals:

Process Plan: MJS

Date: 13-08-01

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

646.9700

REV B

100

0.00

\*100\*

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 7.425"

B-A 13/08/07

2 0

DAS  
08  
9-89

110

0.00

\*110\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per folio FB199

DWG REV: B

FOLIO REV: 4A

13/08/08

2 0

2- deburr and break all sharp edges

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

# Work Order ID 105421

\*105421\*

Page 2

August-01-13 11:35:02 AM

Item ID: 646.9712

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Body

Start Date: 8/01/13

Start Qty: 2.00

\*2\*

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 2.00

\*2\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

\*120\*

QC

Memo

0.00

Quality Control

130

QC8- Inspect parts - second check

0.00

\*130\*

QC

Memo

0.00

Quality Control

131

0.00

\*131\*

HandFinish

Memo

0.00

Hand Finishing

Clean & remove markings (acid etch only)

N/A

see e-mail attached

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

# Work Order ID 105421

\*105421\*

Page 3

August-01-13 11:35:02 AM

Item ID: 646.9712

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Body

Start Date: 8/01/13

Start Qty: 2.00

\*2\*

Cust Item ID:

Required Date: 8/01/13

Req'd Qty: 2.00

\*2\*

Customer:

Reference:

Run Start

\*NR1\*

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

\*NR2\*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

\*140\*

Outsourced

Memo

0.00

Outsource process - Anodize

Issue P/O to ATG: 20929

1- Black Anodize as per Dwg 646.9700

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Conformity is required

CX 13/08/14 (2)

150

Receive & Inspect for Damage & Mat'l Corts

0.00

\*150\*

Packaging

Memo

0.00

Packaging

143/8/30 (2)

155

QC5- Inspect part completeness to step on W/O

0.00

\*155\*

QC

Memo

0.00

Quality Control

DAS  
27  
9-89

B 8-30

d

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

# Work Order ID 105421

August-01-13 11:35:02 AM

**\*105421\***

Page 4

Item ID: 646.9712 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Body  
 Start Date: 8/01/13 Start Qty: 2.00 **\*2\*** Cust Item ID:  
 Required Date: 8/01/13 Req'd Qty: 2.00 **\*2\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: <b>MF</b>	0.00							
<b>*180*</b>									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
190	QC21- Final Inspection - Work Order Release	0.00							
<b>*190*</b>									
QC	Memo	0.00							
Quality Control									

**13-08-30**

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
Operator <input type="checkbox"/>												
Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
<b>FAULT CATEGORY</b>												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	



# Picklist Print

August-01-13 11:35:02 AM

Page 1

Work Order ID: 105421

Parent Item: 646.9712

Parent Item Name: Body

Start Date: 8/01/13

Required Date: 8/01/13

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 13-06-20 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000 7075-T6 BAR 5.000" X 1.000"		Purchased	No				f	18.7810		1.3052632		B.A. 13/08/07	

Location

Loc Qty

Loc Code

MAT008

18.781



M125997

18.781

1.3052 ft

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

# APICAL

INDUSTRIES, INC.

DWG NO. 646.9700

REV: A

PREPARED BY:

J. BECKER

DATE: 07/03/13

EFFECT ON DWG  
☒ INC. ☐ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR

*[Signature]*

MFG

*[Signature]*

QC

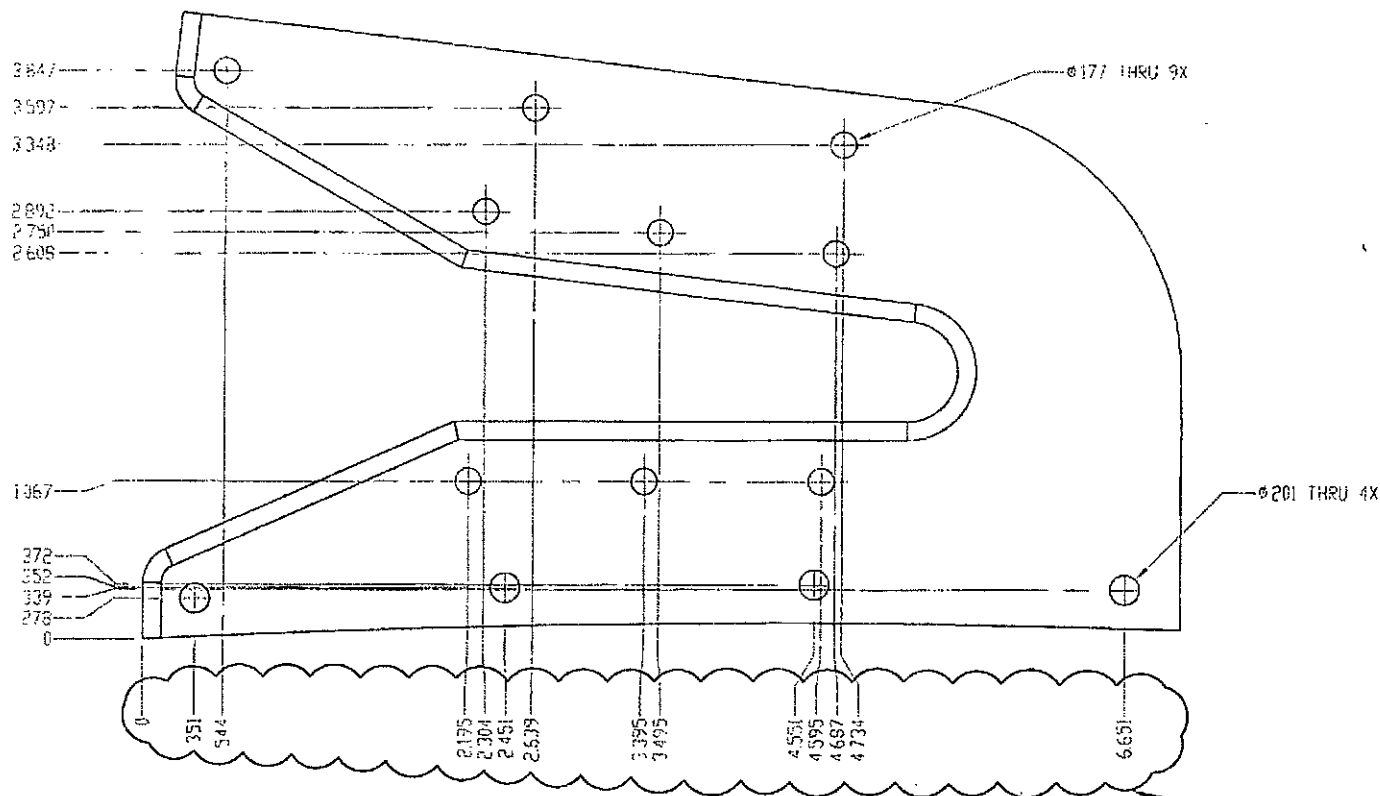
*[Signature]*

EFF:

CURRENT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: ADDED DIMENSIONS. ADDED INSPECTION DIMENSIONS.



105421 M65  
13-08-01

SHEET 4, ZONE D5:

WAS

DOCUMENTS EFFECTED:

☐ MDL

☐ INSTALL INSTRU

☐ ICA

☐ BOM

CHANGE CATEGORY

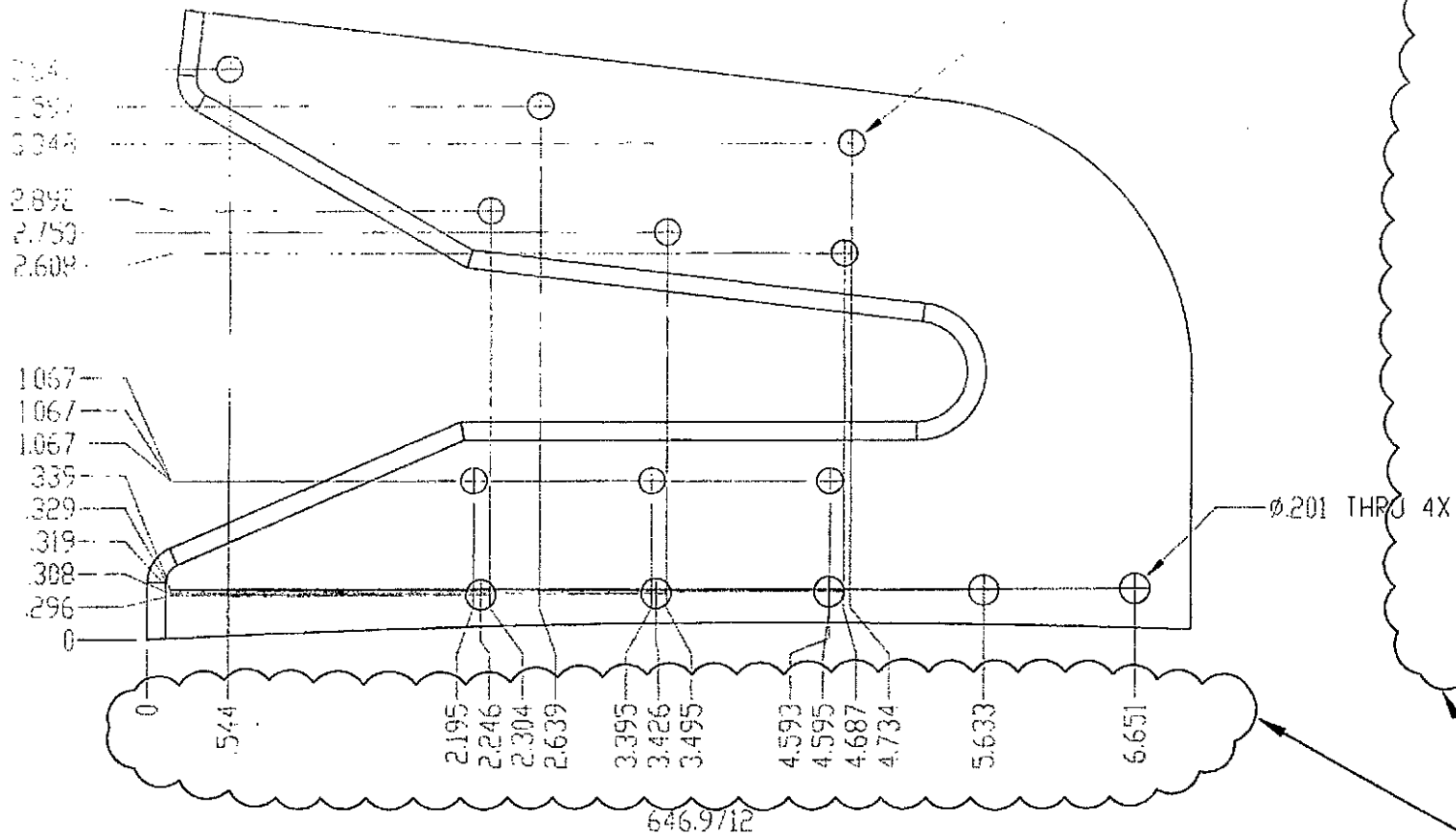
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO



105421

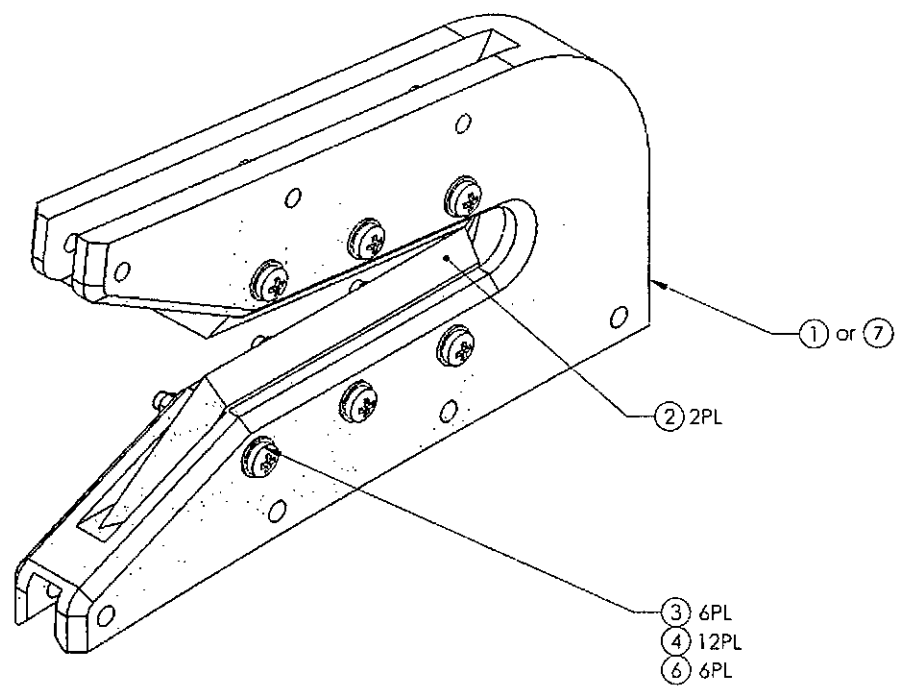


WAS

SHEET 6, ZONE B6, C4:



105421



646.9701  
or  
646.9702

NOTES:

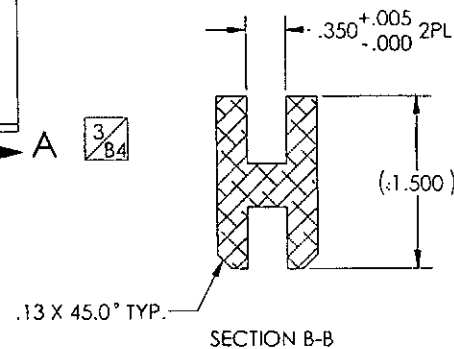
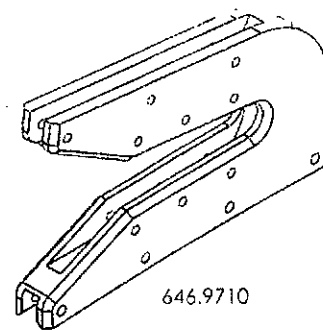
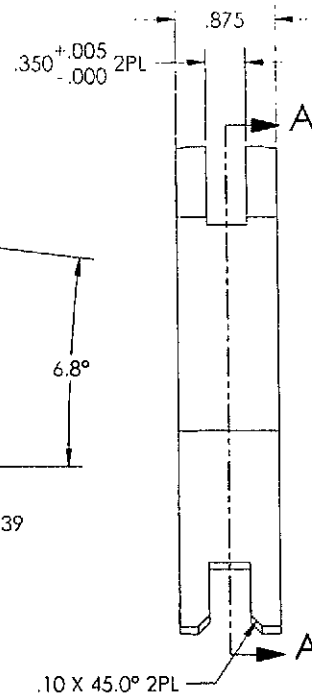
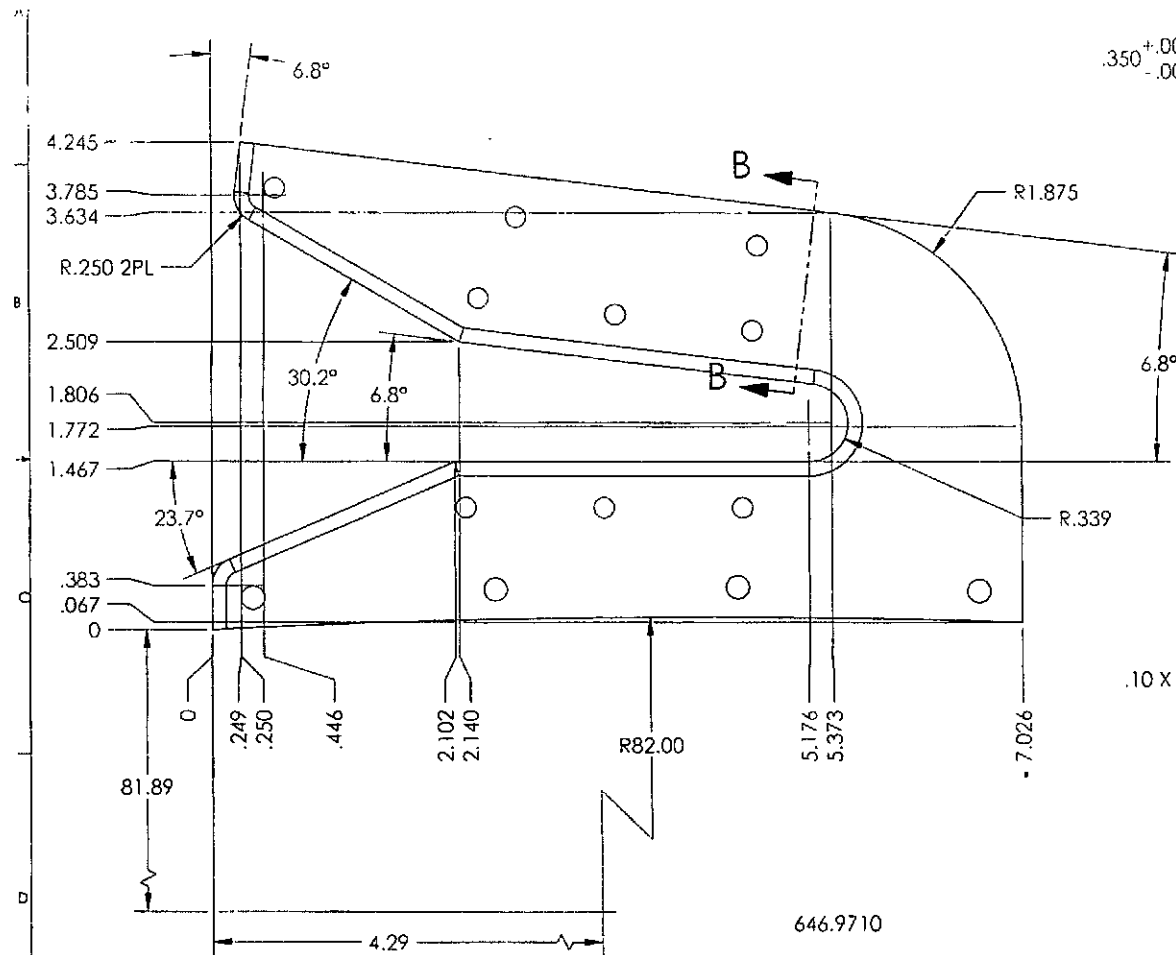
- 1. MATERIAL: ALUMINUM 7075-T6 PER AMS-QQ-A-250/12
- 2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE II, CLASS 2, COLOR BLACK; PRETREAT PRC-DESOTO FR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 3. MATERIAL: AISI A2 TOOL STEEL  
CONDITION: ANNEALED  
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4. FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6. IDENTIFY IAW MPP-120
- 7. APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8. CUTTING EDGE INTENDED TO BE SHARP. DO NOT BREAK SHARP EDGE
- 9. ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

1	7	646.9712	BODY (U CHANNEL)	△	△△
6	5	601.1541	LOCKNUT	M21042.08	
A/R	A/R	5	601.2764	RTV, LOCTITE 598	
12	12	4	601.2764	WASHER	M21042.08
5	5	3	601.2765	SCREW	M21042.08
2	2	2	646.9711	BLADE	△
	1	1	646.9710	BODY	△
			646.9702	CUTTER SUB ASSY	
			646.9701	CUTTER SUB ASSY	
QTY	END #	PART #	DESCRIPTION	MAT'L	SPEC.
PARTS LIST					
NEXT ASSY IS:			APICAL INDUSTRIES		
646.9600			2606 TEMPLE HEIGHTS DR.		
646.9700			OCEANSIDE, CA 92056-3512 (760) 724-5300		
			CUTTER SUB ASSY		
			SCALE: NONE		
			SHEET 1 OF 6		





105421



DESIGN DATE: 01/24/00 DRAWN BY: J. H. H. / J. H. H. CHECKED BY: J. H. H. / J. H. H. APPROVED BY: J. H. H. / J. H. H.		<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92055-3512 (760) 724-5300	
DOWNSHIP NO. COUNTY NO.		<b>CUTTER SUB ASSY</b>	
PART NO. 646.9710 QUANTITY 1 UNIT PRICE \$1.00 TOTAL PRICE \$1.00	CAGE CODE: 07M26 SCALE: NONE	PART NO. 646.9700 SCALE: NONE	REV. 8 SHEET 2 OF 6



[illegible]SECTION A-A 

646.9710

[illegible]



Technical drawing of a cutter sub assembly showing hole locations. The drawing includes a top view of the assembly with various dimensions and callouts. The dimensions are as follows:

- 3.847
- 3.597
- 3.348
- 2.892
- 2.750
- 2.608
- 1.067
- 3.72
- 3.52
- 3.39
- 2.78
- 0
- 0
- .351
- .544
- 2.195
- 2.304
- 2.451
- 2.639
- 3.395
- 3.495
- 4.551
- 4.595
- 4.687
- 4.734
- 6.651
- $\phi .177 \text{ THRU } 9 \times$
- $\phi .201 \text{ THRU } 4 \times$

The drawing also includes a title block with the following information:

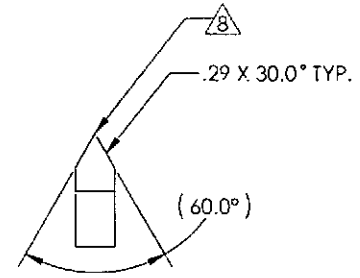
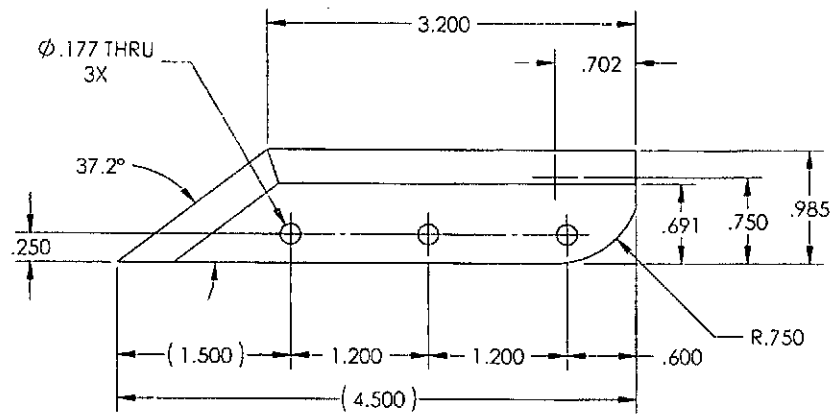
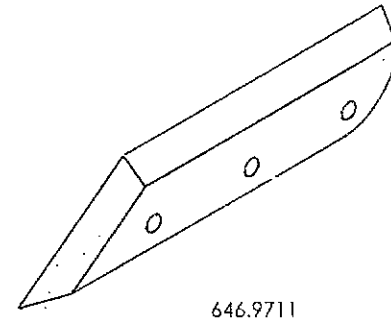
APICAL INDUSTRIES  
2025 TITANITE PILOTING DR  
CUTTER SUB ASSY  
646.9700

646.9710 -

APICAL INDUSTRIES			
2005 EMERALD HEIGHTS DR. CINCINNATI, OH 45255-3912 (600) 724-5300			
CUTTER SUB ASSY			
ORIGINAL PARTS CHIEF: JACOBSON MANUFACTURING: JACOBSON ASSEMBLY: JACOBSON FINISHING: JACOBSON INSPECTION: JACOBSON MATERIALS: JACOBSON PURCHASING: JACOBSON SHIPPING: JACOBSON TRAINING: JACOBSON SAFETY: JACOBSON QUALITY: JACOBSON ENVIRONMENTAL: JACOBSON COMPLAINTS: JACOBSON RECORDS: JACOBSON SECURITY: JACOBSON LEGAL: JACOBSON HUMAN RESOURCES: JACOBSON ACCOUNTING: JACOBSON TAX: JACOBSON INFORMATION SYSTEMS: JACOBSON RESEARCH & DEVELOPMENT: JACOBSON DESIGN: JACOBSON PRODUCTION: JACOBSON SALES: JACOBSON MARKETING: JACOBSON CUSTOMER SERVICE: JACOBSON FIELD SERVICE: JACOBSON DISTRIBUTION: JACOBSON LOGISTICS: JACOBSON WAREHOUSE: JACOBSON INVENTORY: JACOBSON PROCUREMENT: JACOBSON VENDOR MANAGEMENT: JACOBSON SUPPLY CHAIN: JACOBSON RISK MANAGEMENT: JACOBSON COMPLIANCE: JACOBSON GOVERNANCE: JACOBSON STRATEGY: JACOBSON BUSINESS DEVELOPMENT: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOBSON JOINT VENTURE: JACOBSON ACQUISITION: JACOBSON MERGERS: JACOBSON DIVESTITURE: JACOBSON RESTRUCTURING: JACOBSON TURNAROUND: JACOBSON RECOVERY: JACOBSON LIQUIDATION: JACOBSON BANKRUPTCY: JACOBSON REORGANIZATION: JACOBSON CONSOLIDATION: JACOBSON INTEGRATION: JACOBSON SYNERGY: JACOBSON EFFICIENCY: JACOBSON PRODUCTIVITY: JACOBSON PERFORMANCE: JACOBSON PROFITABILITY: JACOBSON GROWTH: JACOBSON INNOVATION: JACOBSON COMPETITIVENESS: JACOBSON MARKET SHARE: JACOBSON BRAND EQUITY: JACOBSON CUSTOMER LOYALTY: JACOBSON RETENTION: JACOBSON ACQUISITION: JACOBSON LIFETIME VALUE: JACOBSON CHURN RATE: JACOBSON NET PROMOTER SCORE: JACOBSON SATISFACTION: JACOBSON ENGAGEMENT: JACOBSON ADVOCACY: JACOBSON REFERRALS: JACOBSON WOM OF MOUTH: JACOBSON SOCIAL MEDIA: JACOBSON INFLUENCERS: JACOBSON CONTENT MARKETING: JACOBSON SEARCH ENGINE OPTIMIZATION: JACOBSON SEM: JACOBSON SOF: JACOBSON DISPLAY: JACOBSON OUTDOOR: JACOBSON DIRECT MAIL: JACOBSON TELEMARKETING: JACOBSON COLD CALLING: JACOBSON SALES PARTNERSHIP: JACOBSON CO-OP: JACOBSON TRADE SHOWS: JACOBSON CONFERENCES: JACOBSON SEMINARS: JACOBSON WEBINARS: JACOBSON E-MAIL MARKETING: JACOBSON PAPER MAIL: JACOBSON DIRECT RESPONSE: JACOBSON CATALOG MARKETING: JACOBSON RETAIL MARKETING: JACOBSON OFFLINE MARKETING: JACOBSON ONLINE MARKETING: JACOBSON DIGITAL MARKETING: JACOBSON MOBILE MARKETING: JACOBSON LOCATION-BASED MARKETING: JACOBSON BEHAVIORAL TARGETING: JACOBSON RETARGETING: JACOBSON ADVERTISING: JACOBSON PROMOTIONS: JACOBSON COUPONS: JACOBSON DISCOUNTS: JACOBSON REBATES: JACOBSON GIVEAWAYS: JACOBSON CONTESTS: JACOBSON SWAG: JACOBSON BRAND AMBASSADORS: JACOBSON INFLUENCERS: JACOBSON SPONSORSHIP: JACOBSON PARTNERSHIP: JACOBSON ALLIANCE: JACOB			



105421



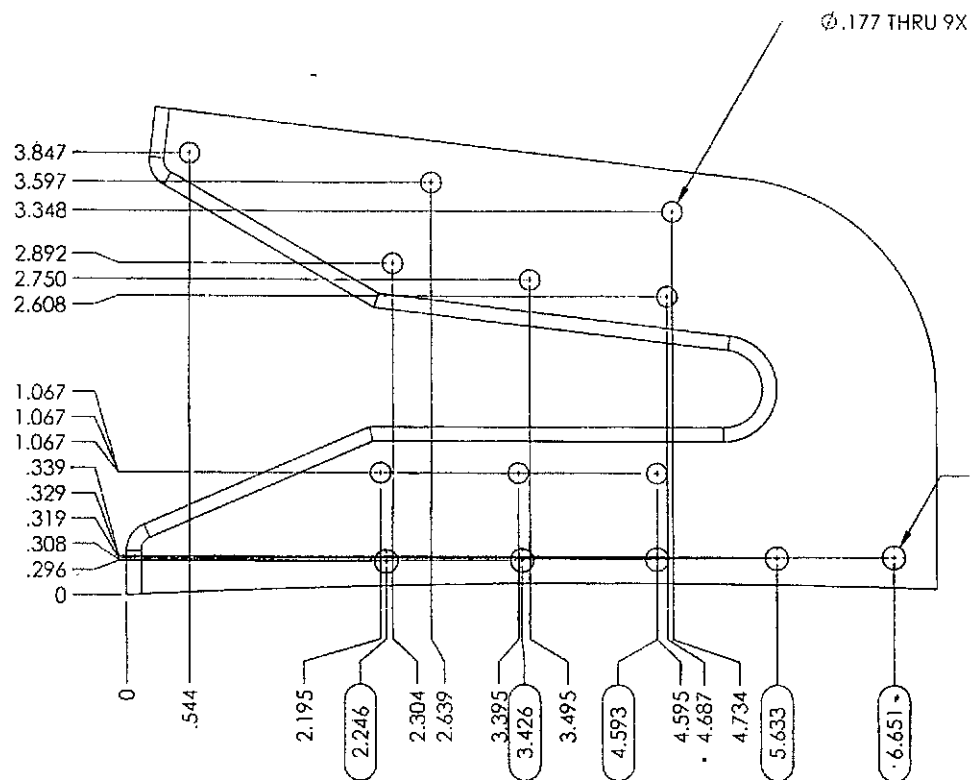
646.9711

DESIGNED BY: [blank] DRAWN BY: [blank] CHECKED BY: [blank] APPROVED BY: [blank]		<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
MATERIALS SPECIFIED: QUANTITIES: DIMENSIONS: FINISHES: TOLERANCES: NOTES:		<b>CUTTER SUB ASSY</b> Dwg. No. <b>646.9700</b> SCALE: NONE	
DATE: 07/76	BY: [blank]	CHKD: [blank]	REV: 8
1 SHEET		5 OF 6	

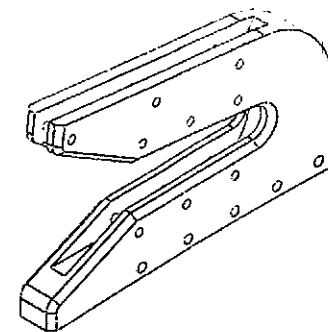
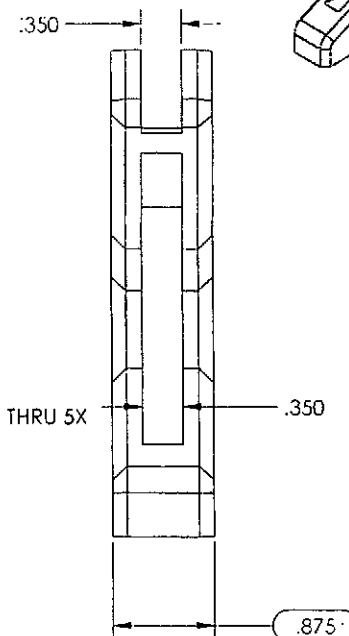




105421



646.9712



646.9712 9

ORIGINAL DATE 05-20-00 REVISED DATE BY CHECKED APPROVED DRAWN PART NO. 646.9712		<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
NAME OF SPECIAL SPECIFIC DIMENSIONS IN INCHES TOLERANCES IN INCHES FINISHES IN INCHES MATERIALS IN INCHES WEIGHTS IN INCHES VOLUME IN INCHES		<b>CUTTER SUB ASSY</b> SET CASE CODEA DWD NO B 0PM26 646.9700 SCALE NONE	
SHEET 1 OF 6		SHEET 1 OF 6	



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	105421
<b>Description:</b> BODY		<b>Part Number:</b>	646.9712
<b>Inspection Dwg:</b> 646.9700 Rev: B		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.296	±.002	.297	-		H-C	31006
.308	±.002	.309	-			
.319	±.002	.320	-			
.329	±.002	.330	-			
.339	±.002	.340	-			
1.067	±.002	1.068	-			
2.750	±.002	2.751	-			
3.348	±.002	3.349	-			
3.847	±.002	3.848	-			
.544	±.002	.545	-			
2.246	±.002	2.246	-			
2.639	±.002	2.640	-			
3.426	±.002	3.426	-			
4.593	±.002	4.593	-			
4.687	±.002	4.687	-			
5.633	±.002	5.632	-			
6.651	±.002	6.651	-			
Ø.201	±.005 ±.001	Ø.201	-		Vern	ML-06
Ø.177	±.005 ±.000	Ø.177	-			
.350	±.005	.352	-			
.875	±.005	.874	-			
4.245	±.005	4.245	-			
7.026	±.005	7.026	-			

<b>Measured by:</b>	GMR	<b>Audited by:</b>	Y	<b>Preliminary Approval:</b>	
<b>Date:</b>	13/08/08	<b>Date:</b>	13-8-9	<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



## FIRST ARTICLE INSPECTION CHECKLIST

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



## Chantal Lavoie

---

**From:** Nigel Forbes  
**Sent:** Wednesday, August 14, 2013 8:05 AM  
**To:** Chantal Lavoie  
**Subject:** ATG

Hi,  
As discussed, all parts going to ATG do not require cleaning prior to the delivery. ATG will clean and prepare the parts prior processing.  
Thanks1

Nigel







A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 62596

Date: 30-Aug-13

To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ship To


DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 lot	Part: ASST  10 PCS 646.3012 4 PCS 646.3310 6 PCS 646.3312 20 PCS 646.3610 11 PCS 646.3812 12 PCS 647.5710 23 PCS 646.9710 5 PCS 647.9711 14 PCS 646.9712  HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2  PRIME MIL-P-23377J TYPE I CLASS N Job: 20130542  Rev:  Line:		
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE: 30/8/13			
CERTIFIED SIGNATURE: 			
RECEIVER SIGNATURE: _____			

